

Springfield Interchange Improvement Program

**Initial Financial Plan
December 2002**

**Presented by the
Virginia Department of Transportation**



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

PHILIP A. SHUCET
COMMISSIONER

Springfield Interchange Improvement Project I-95/I-395/I-495 and I-95/Rt. 644 Interchanges Fairfax County

Initial Finance Plan

LETTER OF CERTIFICATION

The Virginia Department of Transportation has developed a comprehensive Initial Financial Plan for the Springfield Interchange Improvement Project as agreed with the Federal Highway Administration as recommended by the USDOT Office of the Inspector General in their November 2002 Audit Report of the Springfield Interchange Project. The plan provides detailed cost estimates to complete the project and the estimates of financial resources to be utilized to fully finance the project.

The cost data in the Initial Financial Plan provides an accurate accounting of costs incurred as of November 30, 2002 and includes a realistic estimate of future costs based on engineers' estimates and expected construction cost escalation factors. While the estimates of financial resources rely upon assumptions regarding future economic conditions and demographic variables, they represent realistic estimates of available monies to fully fund the project.

We believe the Initial Financial Plan provides an accurate basis upon which to schedule and fund the Springfield Interchange Improvement Project. The Department will review and update the financial plan on an annual basis.

To the best of our knowledge and belief, the Initial Financial Plan as submitted herewith, fairly and accurately presents the financial position of the Springfield Interchange Improvement Project, its cash flows, and expected schedule for the project's construction period. The financial forecasts in the Initial Financial Plan are based on our judgment of the expected project conditions and our expected course of action. We believe that the assumptions underlying the Initial Financial Plan are reasonable and appropriate. Further, we have made available all significant information that we believe is relevant to the Initial Financial Plan and, to the best of our knowledge and belief, the documents and records supporting the assumptions are appropriate.

Philip Shucet

Philip A. Shucet
Commissioner

12/27/02

Date

TABLE OF CONTENTS

SUMMARY.....	1
SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT GRAPHICAL ILLUSTRATION	3
SECTION 1 – BACKGROUND	3
SECTION 1 – BACKGROUND	4
PROJECT DESCRIPTION	4
PROJECT HISTORY.....	7
CURRENT ACTIVITIES	9
PROJECT IMPLEMENTATION SCHEDULE.....	10
SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT WEBSITE	11
SECTION 2 – PROJECT COST ESTIMATE.....	11
CURRENT PROJECT ESTIMATES	11
PROJECT COST ESTIMATES SCHEDULE	14
COST ESTIMATING METHODOLOGY AND ASSUMPTIONS	14
COST CONTAINMENT STRATEGIES	17
SECTION 3 – PROJECT IMPLEMENTATION PLAN.....	17
PROJECT IMPLEMENTATION SCHEDULE.....	17
SECTION 4 – PROJECT FINANCING.....	19
FINANCING THE PROJECT	19
SUMMARY PROJECT FUNDING BY SOURCE.....	19
FINANCIAL RESOURCES ASSIGNED	20
ACTUAL COST COMPARED TO PROJECT COST ESTIMATE.....	21
PROJECT COST ESTIMATES SCHEDULE	21
IMPACT OF OTHER FUTURE COST CHANGES	22
SECTION 5 – PROJECT CASH FLOW.....	22
FORECASTED PROJECT COST COMPARED TO ALLOCATIONS BY FISCAL YEAR.....	22
SECTION 6 – OTHER FACTORS	23
COST OR SCHEDULE FACTORS	23
FUTURE UPDATES	23
SECTION 7 - STAFF RESOURCES	24
EXHIBITS	25
EXHIBIT I - I-95 / I-395 / I-495 INTERCHANGE.....	26
EXHIBIT II - ROUTE 644 / I-95 INTERCHANGE	27
EXHIBIT III – FEDERAL OBLIGATIONS SUMMARY.....	28
EXHIBIT IV – PROJECT ALLOCATIONS	29
EXHIBIT V– DETAILED EXPENDITURE REPORT	30
EXHIBIT VI- SUMMARY OF KEY PROJECT ASSUMPTIONS, RISKS AND MITIGATION.....	35
EXHIBIT VII – EXPENDITURES TO ALLOCATIONS COMPARISON	40

SUMMARY

The Springfield Interchange Improvement Project (the Project) is one of the largest construction projects in the nation. While it is not an official Mega Project as defined by the Federal Highway Administration (FHWA), the size, complexity, traffic volume and location on the main route to the nation's capital make it a Mega Project in the eyes of our stakeholders. Subsection h of Section 106 of Title 23 as modified by Section 1305 (b) of the Transportation Equity Act for the 21st Century (TEA-21) requires a recipient of federal financial assistance for a project with an estimated total cost of one billion dollars or more to submit to the United States Secretary of Transportation an annual financial plan for the project. The current total estimated cost of the Springfield Interchange Improvement Project is \$676,257,000. Even though the Project does not meet the dollar value criteria, this financial plan presents the finances of the Project as though it is a Mega Project as defined by FHWA.

This document is submitted as the Springfield Interchange Improvement Project's Initial Financial Plan. It is being submitted as agreed to the Federal Highway Administration as recommended by the USDOT Office of the Inspector General in their November 2002 Audit Report of the Springfield Interchange Project. As required for Mega Projects, the Virginia Department of Transportation is submitting this detailed financial plan to define the methodology, resources, and time schedule of the work completed and the remaining work to finish the interchange improvements. This plan details the following topics:

1) Background

- Provides a description of the Project
- Details the Project's history
- Explains the current Project activities
- Presents the Project's Implementation Schedule

2) Project Cost Estimate

- Identifies the key cost components
- Explains the cost estimating methodology

3) Project Implementation Plan

- Presents the Project's Implementation Schedule
- Identifies the actual cost incurred and projected expenditures by fiscal year

4) Project Financing

- Lists the committed federal funding sources to date
- Identifies committed state funding sources
- Discusses the project's remaining anticipated federal funding requirements
- Describes the State's commitment to fund the remainder of the project

5) Project Cash Flow

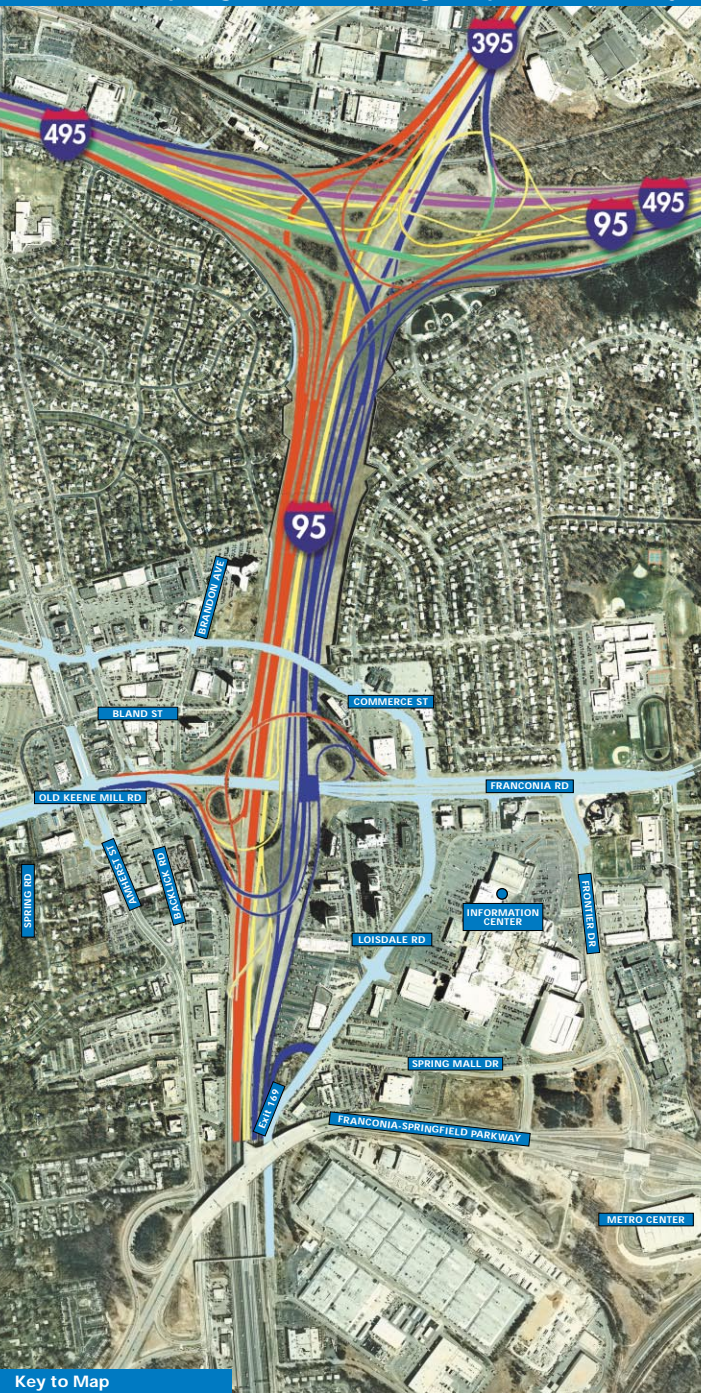
- Analyzes anticipated funding in relation to projected obligation requirements
- Demonstrates funding needs will be satisfied

6) Other Factors

- Other issues or possible unforeseen problems
- Outlines the schedule for future annual updates

These topics and related activities form the Project's Initial Financial Plan. This plan demonstrates and outlines the Department's commitment to sound financial planning and providing the resources needed to complete the Project by December 2007.

Springfield Improvement Project Phases



Key to Map

- Southbound I-95 / I-395
- Northbound I-95 / I-395
- I-95 / I-495 Beltway Outer Loop
- I-95 / I-495 Beltway Inner Loop
- HOV Lanes

Scope of Project Eight years of construction

Two interchanges will be fixed I-95/Capital Beltway and I-95 / Route 644

Completed Springfield Interchange

Will include 24 lanes at its widest point • 50 bridges • 41 miles of roadway
 Separate roadways for local and long-distance traffic • 167 guide signs
 20 electronic message signs • 555 light poles

Motorists will experience slowdowns during construction and VDOT is making every effort to minimize them. No lanes will be closed during morning and afternoon rush hours, weekends or holidays. Motorists will be able to take advantage of improvements as each phase is completed. VDOT is working with the Greater Springfield Chamber of Commerce to ensure that Springfield stays completely accessible and open for business throughout the project.

In Phase 1 VDOT added a fourth lane on I-95 south from Springfield to Newington and an exit ramp from I-95 northbound to Spring Mall Drive

Phases 2 & 3



(looking south towards Richmond)

During Phases 2 & 3 Old Keene Mill Road widened to 8 lanes from Commerce Street to Spring Road and to 10 lanes from Spring Road to I-95

Construct Franconia Road over Loisdale Road and Frontier Drive
 Widen Commerce Street bridge to four lanes

Rebuild I-95/Route 644 (Old Keene Mill/Franconia Road) interchange
 Add third southbound lane to Loisdale Road

Improve Amherst Avenue bridge
 Add 3rd lane (turn-lane) southbound from Spring Mall Dr to Newington Rd

Phases 4 & 5



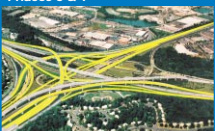
(looking north towards Washington)

During Phases 4 & 5 Construct I-95 southbound roadway from Capital Beltway to Franconia-Springfield Parkway

Relocate Capital Beltway outer loop roadway

Construct ramp from I-395 south to Beltway Inner loop

Phases 6 & 7



(looking north towards Washington)

During Phases 6 & 7 Complete construction on I-95 northbound roadway and all remaining local and through ramps and HOV lanes

Phase 8



(looking north towards Washington)

In Phase 8 Construct HOV ramps to Capital Beltway if decision is made to build HOV lanes on the Beltway

Section 1 – Background

Project Description

The Springfield Interchange Improvement Project (SIIP) was initiated due to the large volumes of traffic utilizing the I-95/I-395/I-495 interchange in Northern Virginia. Volumes exceeding 430,000 vehicles per day are currently traveling through this interchange. Excessive merging and weaving movements occur as vehicles enter or exit connecting ramps, especially when vehicles merge from I-495 onto I-95 or I-395.

The purpose of the Springfield Interchange Improvement Project is to relieve the bottleneck at two major interchanges (I-95/I-395/I-495 and I-95/Route 644) by constructing highway improvements that will reduce congestion and enhance traffic operations and safety throughout the project area. These improvements include High Occupancy Vehicle (HOV) lanes and connections, elimination of dangerous merging and weaving movements, reconfiguration of interchange ramps, and the physical separation of local traffic and through traffic. The planned improvements, which include over 50 new bridges, will provide direct flyovers to eliminate dangerous merging and weaving. The limits of the project are west on I-495 to Hemming Avenue, East on I-95 to Van Dorn Street, south on I-95 to approximately one mile south of the Old Keene Mill Road Interchange (Route 644), and north on I-395 to Edsall Road. The Project also incorporates improvements to several local streets within the Springfield area, including Old Keene Mill Road, Commerce Street, Franconia Road, Loisdale Road, and Amherst Avenue.

The size and complexity of the improvements to be constructed as part of the Springfield Interchange Improvement Project required it to be done through a series of phases. As of the report date, a significant portion of the work was complete, with only Phases VI and VII, the last phase of construction, remaining to be started. The information in this financial plan will be presented by the phases or segments that comprise the SIIP as follows:

- **Preliminary Engineering** – is being performed as a single work item for the entire scope of the Project.
- **Right of Way** – all real estate acquisitions and related work is considered a single work item.
- **Construction** – the construction work for the SIIP has been divided into several smaller efforts. The following details the phases of construction.
 - o **Phase I:** Limits extend from 0.3 kilometer north of Fairfax County Parkway to 0.8 kilometer north of Franconia/Springfield Parkway (3.9 kilometers). This work consisted of constructing the fourth lane of I-95 southbound between the Route 644 (Old Keene Mill Road Interchange) and the Newington Interchange. This construction work began in February 1995 and was completed in August 1996. The Commonwealth Transportation Board (CTB) approved the Location Public Hearing for the Springfield Interchange (approving alternative 12) in June 1994 and the fourth lane construction was authorized in November 1994. As noted by the dates, the

fourth lane design work was well underway before the CTB approved the Springfield Interchange concept.

- o **Phase I-A:** Limits extend from 0.6 kilometer south of Route 789 (Loisdale Road) and Route 4214 (Spring Mall Drive) to Route 789 and Route 4214. This work consisted of constructing the Spring Mall Ramp from I-95 northbound to Loisdale Road. This new ramp allowed the existing loop ramp from I-95 northbound to Old Keene Mill Road westbound to be closed before Phases II and III went under construction. The loop ramp was reconstructed as part of Phases II and III construction. Phase I-A work began in April 1997 and was completed in June 1998.
- o **Phase I-B:** Limits include westbound roadway and ramp improvements from northbound I-95 (0.8 kilometer). This work consisted of widening the existing one-lane ramp from I-95 northbound to I-495 westbound to a two-lane ramp. This work was done in advance of the Phases II and III construction to reduce traffic backups through the interchange. Phase I-B work began in November 1998 and was completed in October 1999.
- o **Phases II and III:** Limits extend from I-95/Franconia/Old Keene Mill, Commerce Street, part of I-95 northbound lane to Franconia/Old Keene Mill west interchange at Commerce Street (2.9 kilometers). Construction began in March 1999 and was substantially complete earning the early completion incentive in August 2001, and formally accepted in June 2002. The construction of these phases included:
 - Widening Old Keene Mill Road to eight lanes from Commerce Street to Spring Road and to 10 lanes from Spring Road to I-95.
 - Widening Franconia Road and constructing the Franconia Road elevated roadway overpass from I-95 to east of Frontier Drive.
 - Constructing new Commerce Street Bridge and widen to four lanes.
 - Rebuilding the I-95/Route 644 interchange.
 - Adding the third southbound turn-lane on Loisdale Road to Newington.
 - Rebuilding the Veterans Bridge (Amherst Avenue) to include decorative exterior honoring veterans and providing pedestrian access onto and across the bridge.
- o **Phase IV:** Limits extend from I-395/I-495 – I-95 southbound express lanes, part of HOV lanes south of Beltway to I-395/I-495 – I-95 outer Beltway, inner Beltway westbound ramp (3.4 kilometers). The construction notice to proceed was given in October 2000 with an original estimated completion date of late 2003. The completion date for this phase has been revised to November of 2004. Construction includes:
 - Direct bridge for westbound Capital Beltway (I-495) traffic to southbound I-95.
 - Relocating existing eastbound I-495 traffic through the interchange.
 - Enhancing I-495 eastbound movements to Van Dorn Street.
- o **Phase V:** Limits extend from 0.03 kilometer east of Hemming Avenue to 0.4 kilometer west of I-395 (2.4 kilometers). Construction began in August of 2001 with

an as bid completion date of May 2003. This phase is now estimated to be completed in May 2004 due to delays to the contractor. Includes constructing the ramp from I-395 south to westbound I-495 and improvements to I-495 west to Hemming Avenue, and both inner and outer loops of the Capital Beltway from approximately I-395 to Hemming Avenue.

- o **Phases VI and VII:** Limits extend from northbound I-95 to I-495 inner loop to I-95 northbound express lanes with various ramps (4.2 kilometers). These phases will construct the I-95 northbound roadway and all remaining local and through traffic ramps and HOV lanes. Design is 90% complete with construction estimated to commence in October 2003 and be completed in December 2007.
- o **Phase VIII:** The original Springfield project concept included an eighth phase, which was the construction of HOV connector ramps from I-95 and I-395 to the Capital Beltway. Since the approval of this phase is linked to the widening of the Beltway Project, it was removed from the SIIP. The roadway design for this phase was 60% complete and the related bridge design was approximately 30% complete when the phase was deferred and moved to the Capital Beltway project in accordance with an August 7, 2000 resolution of the CTB. The design costs remain an expense of the SIIP. Phase VIII has been estimated to cost \$84 million.

This was an integral part of the Springfield Interchange Improvement Project and the actions taken by the CTB to move it to the Capital Beltway was not intended to diminish that role. Phase VIII was moved to the Beltway project pending approval of related environmental documents for the Beltway. The traffic analysis on the northbound I-95 lanes where the HOV lanes merge with the conventional lanes indicate that the conventional lanes will work until such time that I-95 northbound is widened between the Newington Interchange and Route 123, adding an additional northbound lane. However, the intent was to revisit the HOV decision once the Environmental Document was approved for the Beltway and a determination is made as to whether HOV lanes will be part of the Beltway.

Phase VIII is listed in the Department's current Six-Year Program. In addition, the Capital Beltway Location Public Hearing has been held and the findings will be presented to the Commonwealth Transportation Board and the status of Phase VIII will be addressed. VDOT has also received a Public-Private Transportation Act proposal suggesting other alternatives for the Capital Beltway.

- **Other Associated Activities** – To expedite the Project and minimize impacts to the traveling public, an information center was established and many congestion mitigation efforts were instituted.

Project History

The Springfield Interchange Improvement Project has been underway for over ten years. To help understand the efforts that have been accomplished to date, the following is a brief chronology of the project:

September 1991

Project listed in Metropolitan Washington Council of Governments' (COG) Long Range Transportation Plan

November 1991

Federal project authorized for Phase I preliminary engineering

June 1992

Public Information Meeting No. 1 held

November 1992

Public Information Meeting No. 2 held

June 1993

Public Information Meeting No. 3 held

January 1994

Environmental Assessment/Section 4(f) Evaluation approved Location Public Hearing

June 1994

CTB gave location approval for Alternative 12 and resolutions for:

- Pursuing HOV access to I-95 from Franconia/Springfield Parkway
- Establishing a Congestion Management Team
- Providing pedestrian/bike accommodations on Commerce Street
- (Including Franconia Road overpass over Frontier Drive to enhance access to the Springfield Transportation Center)
- Expediting added fourth lane southbound
- Providing funds in Six-Year Plan for advanced right of way acquisition

September 1994

- CTB authorized final design
- Finding of No Significant Impact and Section 4(f) Determination approved
- Alternate 12 was selected

February 1995

Phase I project for construction of fourth lane I-95 southbound begins

June 1996

Interchange Justification Report for Franconia/Springfield Parkway Single Occupancy Vehicle (SOV) connections to I-95 published

August 1996

Phase I project for construction of fourth lane completed

September 1996

Design Public Hearing for Spring Mall Ramp, Phase I-A, was held

November 1996

CTB voted to modify design concept so as to not preclude SOV ramps to the Franconia/Springfield Parkway

April 1997

Phase I-A project for construction of Spring Mall Ramp began

May 1997

Interchange field inspection

June 1997

- Design Public Hearings held
- Interchange Justification Report for I-95/I-395/I-495 Interchange published

August 1997

- Franconia/Springfield Parkway SOV Ramp access points approved
- CTB approved final design

September 1997

Categorical Exclusion for improvements to Loisdale Road from Franconia/Springfield Parkway to Newington Interchange approved

October 1997

Environmental Reevaluation Report/Section 4(f) Evaluation approved

June 1998

Phase I-A project for construction of Spring Mall Ramp completed

August 1998

ROW authorization amended to add purchase of right-of-way for a staging area for work on I-95 from and including the Springfield Interchange to the Woodrow Wilson Bridge

November 1998

Phase I-B project for construction of I-495 ramps began

March 1999

Project for construction of Phase II/III began

October 1999

Phase I-B construction completed

June 2000

Soundwalls approved for Phases IV, V and VI – Barriers No. 2/3, 6/7, 8 and 9

October 2000

Construction notice to proceed given on Phase IV

August 2001

- Work substantially completed on Phases II and III in accordance with contract terms, earning contractor an early completion incentive
- Work commences on Phase V

June 2002

Phases II and III formally accepted

November 2002

Audit of the Springfield Interchange Project issued by the Office of the Inspector General, U. S. Department of Transportation

Current Activities

The following is a summary of the major work activities currently in progress on the Springfield Interchange Improvement Project.

Phase IV and V Construction

Construction work continues on Phase IV and V

Phase VI and VII Design

Work on the design for Phases VI and VII is ongoing with 90% of the design completed

Right of Way and Utilities

The acquisition phase of the Project is substantially complete. There are 28 condemnations and/or Agreement After Certificates to complete over the next three years. Also, due to plan revisions and/or changes in ownership, some additional acquisitions may be required. Utility relocation and/or adjustments are complete with the exception of the in-plan work and what is determined on Phases VI and VII after the design change and the Utility Designation. Plans with cross sections and a designation of underground utilities are required before a time line can be established.

Congestion Management

A steering committee comprised of federal, state and local government representatives continues to oversee the implementation of congestion management strategies.

The following are the strategies included:

- Reducing peak period volumes
- Maintaining public awareness of the project and its benefits
- Providing commuter information
- Informing commuters and area businesses about the project impact
- Encouraging the use of transit, carpooling, and vanpooling through increased transit services, reduced transit fare packages, additional trains on the Virginia Rail Express, vanpool subsidies, and increased commuter parking
- Enhance traffic flow on the adjacent local network by improving alternate routes around interchanges

Springfield Interchange Improvement Project Information Center

The Information Center continues to operate Monday through Saturday, 11 a.m. to 9 p.m. The Information Center provides outreach information to meet the full time needs of motorists, local and regional residents, and local business owners concerned about the impact of the Project. It serves as the central location to implement the Project's extensive public awareness program. The center operates an interactive website (springfieldinterchange.com), a toll free 24 hour hotline (1-877-959-5222), disseminates Project information (upcoming traffic switches, lane closure, night work, etc.) through various media inquires community and business events, coordinates all media inquiries regarding the Project, co-shares its facility with ride-sharing and public transportation ticket sellers, and works closely with other states agencies to promote their services to the public.

Project Implementation Schedule

The following chart illustrates the actual or anticipated start and completion dates of each of the construction phases.

Springfield Interchange Improvement Project Project Implementation Schedule		
Phase	Start Date	Completion
Phase I	2/95	8/96
Phase I-A	4/97	6/98
Phase I-B	11/98	10/99
Phases II & III	3/99	6/02
Phase IV	10/00	11/04*
Phase V	8/01	5/04*
Phases VI & VII	10/03**	12/07**
* Scheduled per contract		
** Estimated		

Springfield Interchange Improvement Project Website

Additional information on the Springfield Interchange Improvement Project can be found on the Project's website at www.springfieldinterchange.com. The website provides the following information:

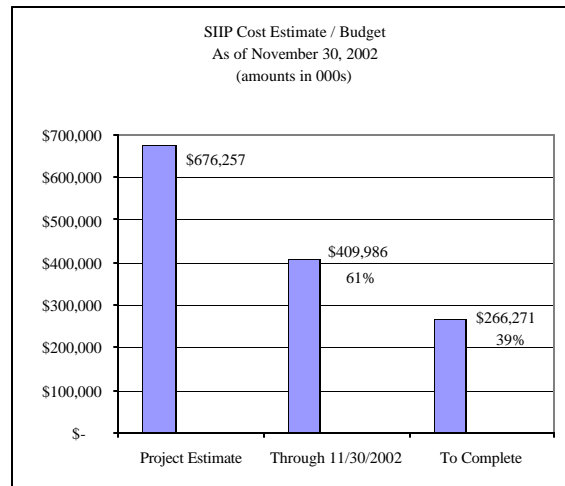
- Weekly Updates
- Commuter Solutions
- Project Background
- Project Schedule
- Before and After
- Safety Tips
- Photo Gallery
- Contact Options

Section 2 – Project Cost Estimate

Current Project Estimates

The current estimated cost of the Springfield Interchange Improvement Project is \$676,257,000 in year-of-expenditure dollars. Expenditures incurred through November 2002 totaled \$409,986,000, with an estimated cost to complete of \$266,271,000. The SIIP estimate is comprised of twelve distinct elements. The elements are:

- Preliminary Engineering
- Right of Way acquisition
- Phase I - Construction of fourth lane on I-95 southbound between the Old Keene Mill Road and Newington interchange
- Phase I-A - Construction of the Spring Mall Ramp
- Phase I-B - Adding second lane to the existing ramp from I-95 northbound to I-495 westbound
- Phases II and III - Construction of the I-95/Route 644 interchange and local arterial streets
- Phase IV - Construction segment east to Van Dorn Street
- Phase V - Construction segment west to Hemming Avenue
- Phases VI and VII - Complete the construction of the I-95 northbound roadway and all remaining local and through ramps and HOV lanes
- Congestion Mitigation
- Information Center
- Stream Compensation



Like many large urban highway projects, the SIIP has experienced its share of increases in the project's estimated cost. The various reasons for the past increases have been addressed. In addition, the current project estimate takes into account several recent developments that changed some of the conditions and scope of the project. For example, delays in Phase IV were caused by both restrictions in work hours on the critical path bridges over CSX / WMATA tracks and the unavailability of CSX flagman needed to prosecute the work at project start. Additionally, contractor work hours were reduced due to heavier than expected volumes of both passenger and freight rail traffic. These delays were beyond VDOT's control. Delays in Phase V were caused by the need to split Phases IV and V into separate contracts, which resulted in an oversight in the final plan revision and review and led to conflicts with the Phase IV sanitary sewer line construction lying in the Phase V critical path. Recent agreements reached with Norfolk Southern Railroad have required the redesign of five bridges passing over their tracks, to allow for a future third track. The cost of design and construction for these revisions has been factored into the current SIIP estimate.

The following is a review of several areas where original cost estimates were subject to cost increases.

Impacts of Unknown and Future Costs: Early cost estimates for the Springfield Interchange Improvement Project were developed when the design for the entire project was only 15 percent complete. Since that time, the full scope of the project has been better defined. Additionally, cost increases occurred in labor and materials over time, further increasing the actual cost. The current estimate and budget is based on complete designs for all phases except Phases VI and VII. To improve forecasted cost estimates and present year-of-expenditure estimates, VDOT uses factors for inflation and contingencies on all projects. The current estimate is presented in year-of-expenditure dollars. The following factors have also affected costs:

- **Design Changes/Public Input:** Before a design becomes final, input is sought from elected officials representing local jurisdictions and the public. Several design modifications to improve the area's quality of life were added, modified or enhanced based on local input. Additionally, costs associated with Right of Way and the purchasing (acquisition) of real estate to build the project must also be accounted for and included in the project costs. In Northern Virginia, Right of Way (real estate) acquisition costs are difficult to estimate, tending to be very expensive because of the tremendous growth in residential and commercial development that has increased property values.
- **Congestion Management-Reducing Motorist Stress:** Of major concern to VDOT in rebuilding the Springfield Interchange was how to move more than 430,000 vehicles each day through the construction zone without causing undue stress and delay to motorists. To address this concern and keep traffic moving during construction and help motorists during their daily commute, Virginia developed one of the nation's most creative and ambitious Congestion Management Plans (CMP). Early cost projections for the Springfield Interchange Improvement Project were based only on construction requirements and did not include non-construction costs such as the development of important construction management plans. Costs for these essential quality of life programs and services were factored in after the original project estimate was completed.

The Springfield Interchange Improvement Project CMP pays for programs developed to enhance commuter travel during construction.

A good congestion management plan helps relieve commuter stress by offering alternative commuter options during construction. Virginia is proud of its national reputation as a leader in developing congestion management programs. The \$28 million congestion management program for the Springfield Interchange Improvement Project is designed to keep traffic moving through the interchange during construction. The components of the program include:

- Improvements to alternate routes around the interchange
 - Fire/rescue equipment, staff for emergency services, and additional police services
 - Additional travel options for commuters
 - Additional park-and-ride lots adding thousands of commuter parking spaces in the I-95 corridor
 - Increased transit services, including reduced transit fare packages, additional trains on the Virginia Rail Expressway (VRE) and vanpool subsidies were established by working with local governments and regional transit partners.
-
- **Springfield Interchange Improvement Project Information Center:** In addition to the \$28 million CMP, \$5,982,000 has been provided to finance the building and operations the nation's first retail Information Center (IC). Located in the Springfield Mall, the IC was developed to meet the full-time needs of motorists, local residents and business owners concerned about the impact of the project and as the central location to implement the Project's extensive public awareness program. The IC sells transit tickets, and provides carpool and vanpool information, as well as transit schedules and ride share information. Since opening in 1999, over 160,000 motorists and area residents have visited the center to become more familiar with the Project. The IC staff also interacts with motorists via e-mail sent to the Project's website (www.springfieldinterchange.com) and by the IC toll-free phone number (1-877-959-5222). From Maine to Florida, motorists contact the IC to get the most up to date construction information. The Springfield Information Center is located inside entrance No. 3 of the Springfield Mall and welcomes motorists six days a week, Monday through Saturday, 11 a.m. to 9 p.m.

Project Cost Estimate: The cost estimate for the Springfield Interchange Improvement Project is composed of twelve distinct components, with each of the construction phases detailed by major work elements. The following chart presents the current cost estimates. Since a large portion of the cost has already been incurred, cost through November 30, 2002 and estimated to complete are detailed.

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

Project Cost Estimates Schedule
(As of November 30, 2002 and to complete)
(amounts in 000s)

			Expenditures	
Phase	Description of Activity	Project Estimate	Through 11/30/2002	To Complete
Pre-Construction Activities				
PE	Design	\$ 48,000	\$ 44,822	\$ 3,179
RW	Acquisition of real estate	75,000	68,612	6,388
Construction Activities				
Phase I	I-95 southbound 4th lane	2,973	2,973	Completed
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	2,040	2,040	Completed
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	869	869	Completed
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road	131,500	130,082	1,418 *
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	172,938	105,583	67,355
Phase V	Part of eastbound Beltway; Ramp N-W	83,143	39,006	44,137
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	125,362	-	125,362
Other Activities				
Congestion Management	Minimize traffic impacts	28,000	14,390	13,610
Information Center	Driver information service	5,982	1,610	4,372
Stream Compensation	Environmental Requirement	450	-	450
Total Project		<u>\$ 676,257</u>	<u>\$ 409,986</u>	<u>\$ 266,271</u>

* Represents set-asides for final quantity adjustments and related close out costs.

* Represents set-asides for final quantity adjustments and related close out costs.

Cost Estimating Methodology And Assumptions

The Project cost estimate was determined by using VDOT construction factors that have been supplemented with cost experience from both completed and ongoing phases of work (Phase II

through Phase V), input from the USDOT Office of the Inspector General, and review comments from the FHWA's Richmond office. The following presents information on the development of the estimated cost for each phase of work.

- **Preliminary Engineering**

The \$48,000,000 Preliminary Engineering estimate was derived by analyzing the expenditures to date through November 2002 and assessing the remainder of cost associated with the current HNTB design contract plus pending supplement to design the bridge modifications required by Norfolk Southern Railroad and the additional man-hours required for design liaison. Additionally, man-hours were estimated for in-house work through the advertisement date Phases VI and VII in June 2003.

- **Right of Way**

The right of way activities, estimated at \$75 million, are over 90% complete. The remaining anticipated expenditures are based on condemnation suits and historical data from project 0095-029-F20, RW202. In addition, the projected remaining expenditures include a 30% appraised value increment (based upon historical settlements) for condemnation cases, plus costs for attorneys, appraisal updates and reviews, appraiser testimony, expert witness research and testimony, engineering research and testimony, commissioner fees, survey fees and staff time.

- **Phase I**

All of the work elements in this phase (I-95 southbound fourth lane) were completed at a cost of \$2,973,000. The work was completed and accepted in August 1996.

- **Phase I-A**

All of the work in this phase (ramp connecting I-95 NB to Spring Mall Drive) was completed at a cost of \$2,040,000. The work was completed and accepted in June 1998.

- **Phase I-B**

All of the work in this phase (second lane added to existing ramp from I-95 northbound to I-495 westbound) was completed at a cost of \$869,000 in October 1999.

- **Phase II and III**

The construction of this phase is complete, however negotiations concerning the final quantity reconciliation remain ongoing, with both semi and final payments expected in the near future. The budgeted cost for this phase is \$131,500,000.

- **Phase IV**

The awarded \$117,398,000 construction contract represents approximately 68% of the entire Phase IV cost. Normally, the Department estimates contingencies to be 11% of the contract value (\$12,914,000). However, due to unforeseen events and conditions, the contingency amount has been adjusted to \$27,771,000 to account for contract schedule extension due to project scope changes, quantity overruns and delay impacts associated with bridge construction over the CSX/Wmata tracks. The construction engineering cost, which is adjusted to account for schedule extensions for the above noted delays, is

forecasted to be \$20,855,000. Also included in the estimate for this phase is \$6,914,000 for an incentive bonus for early completion. The budgeted project cost is \$172,938,000.

- **Phase V**

The awarded \$52,690,000 construction contract represents approximately 63% of the entire Phase V costs. The construction contract value is the awarded amount of the contract to perform the Phase V work. Normally, the Department estimates contingencies to be 11% of the contract value (\$5,796,000). However due to unforeseen events and conditions, the contingency amount has been adjusted to \$13,532,000 to account for contract schedule extension due to project scope changes, quantity overruns and impacts associated with splitting Phases IV and V into separate contracts which led to conflicts in sanitary sewer line construction lying in the Phase V critical path construction. Also included in the estimate for this phase is an early completion incentive of \$6,480,000. The construction engineering estimate of \$10,441,000 has been adjusted to account for the schedule extension. The total cost for this phase is budgeted at \$83,143,000.

- **Phase VI and VII**

The estimated \$92,309,000 construction contract represents approximately 74% of the Phase VI and VII estimate. This estimate is based on design work that is 90% complete and is adjusted for inflation based on an anticipated construction start of November 2003. Again, the Department generally estimates contingencies to be 11% of the contract value (\$10,209,000). However, based on an engineering estimate on a 90% package and historical experience in costs derived from contingencies required for Phases II through V, the estimated contingencies have been adjusted to \$13,259,000. The construction engineering cost is projected to be \$19,794,000, which takes into consideration a construction management operation of 48 months. The total project cost is estimated at \$125,362,000.

- **Congestion Management**

The SIIP Congestion Management Program (CMP) was initiated to assist the moving of more than 430,000 vehicles each day through the Project's construction zone. A steering committee and several subcommittees, comprised of federal, state and local government representatives, oversee the general implementation of the program's \$28 million budget and related congestion management strategies. The CMP Steering Committee meets periodically to review the financial plan and evaluate the effectiveness of the program's strategies. As program needs change, the strategies will be re-evaluated.

- **Information Center**

The \$5,982,000 budget for this phase of the work was built by developing forecasts for building lease, sub-lease income, staffing, office supplies, outreach materials, website support, other miscellaneous expenses, and adjusted for inflation. As program needs change, the strategies will be re-evaluated.

- **Stream Compensation**

The Stream Compensation was a requirement of the Environmental Document to mitigate impacts to Backlick Run Creek. The Central Office Environmental Division is managing the stream restoration work. The restoration will occur offsite of the SIIP, on Turkeycock Creek. The preliminary engineering cost associated with this is included in the preliminary engineering estimate. The contract advertisement for this work will be in June 2003, but independent of Phase VI and VII. The project construction estimate is \$450,000 inclusive of construction contingency and all engineering and inspection services.

- Exhibit VI provides a detailed presentation of project assumptions, risks and mitigating measures.

Cost Containment Strategies

The Department has deployed a number of cost containment strategies, particularly as they apply to the upcoming Phases VI and VII. They include a thorough review of project risks based upon documented assumptions (Exhibit VI) and the inclusion of resource and cost loaded scheduling techniques as requested by the USDOT OIG. In addition, the Phase VI/VII contract assembly will be built on improved plans that should dramatically reduce plan errors and omissions. Improved practices for cost forecasting and detailed budget monitoring, combined with reasonable contingency set asides will hold the remaining SIIP costs on target.

Section 3 – Project Implementation Plan

Project Implementation Schedule

The following table depicts the project schedule. This schedule is aggressive yet very realistic. All necessary permits have been obtained. The following techniques have been or will be employed to ensure that the schedule is achieved:

- \$10,000,000 bonus was offered on Phase II and III to encourage early completion and the phase was substantially completed early
- Provided incentives/disincentives in Phases IV and V for early completion
- Assigned a single project manager, Larry Cloyed, as responsible for project execution
- Development of this Initial Finance Plan
- Development of resource loaded schedules and a master integration schedule

Springfield Interchange Improvement Project Project Implementation Schedule			
Phase	Description of Activity	Start Date	Completion Date
Phase I	I-95 southbound 4th lane	2/95	8/96
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	4/97	6/98
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	11/98	10/99
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road	3/99	6/02
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	10/00	11/04*
Phase V	Part of eastbound Beltway; Ramp N-W	8/01	5/04*
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	10/03**	12/07**
* Schedule per contract ** Anticipated			

The USDOT OIG recommended in their November 2002 audit report that VDOT prepare a resource-loaded schedule for the contract phases under construction and an integrated master schedule for the entire project. The SIIP, now past its midpoint, has to date used precedence diagram based schedules and monthly updates (with narratives) provided by the contractors, in accordance with the provisions of the contracts. These schedules have been cost loaded, but not resource-loaded.

The Department has concurred with the OIG recommendation, and will provide resource-loaded schedules for Phases IV, V, VI and VII, and prepare a Master Schedule for all active and planned schedules. A special provision is being written for Phases VI and VII to incorporate resource and cost loaded scheduling at the outset, and change orders will be utilized to obtain such schedules for the ongoing Phases IV and V. Upon receipt of these schedules, VDOT will prepare the integrated Master Schedule. It is expected that such schedules for the ongoing work will be in place by early 2003, with the Phases VI and VII schedule in place by late 2003.

Section 4 – Project Financing

Financing The Project

The total funding necessary to complete the Springfield Interchange Improvement Project is currently projected to be \$676,257,000. A summary of the funding by source is presented as follows:

Summary Project Funding by Source
(amounts in 000's)

<u>Source</u>	<u>Amount</u>
Federal	
Interstate Maintenance	\$ 571,861
National Highway System	34,244
Demonstration	<u>22,041</u>
Total Federal	628,146
State	<u>48,111</u>
Total Funding	<u>\$ 676,257</u>

Through November 30, 2002, \$420,445,698 of federal funds have been authorized to the Project from Interstate Maintenance, National Highway System, and Federal Demonstration categories. Future federal authorizations of \$207,700,669 are planned to finance the Project. Exhibit III details the current and planned federal authorizations by federal project. The current federal authorization plan is based on the current fiscal year 2003 Six- Year Program and Statewide Transportation Improvement Program and like the individual project allocations, updates will be required during the next annual update.

The Commonwealth of Virginia has committed \$48,111,000 in state revenues to the Project. This represents the state funds needed to match the federal funds. The Transportation Trust Fund was created in 1986 with dedicated revenues for the Construction program. These revenues along with the Federal revenue are the primary funding sources for all road construction projects. Once a proposed project is included in the six- year program and assigned allocations, the project construction process is started. § 33.1-23.01 of the Code of Virginia states the term "allocation" shall mean a commitment to expend funds available for construction during each fiscal year. Funds that cannot be expended as allocated within each fiscal year shall be identified, as part of future commitments, and the reason for the failure to spend allocations shall be specifically included in the annual construction improvement program. Thus, VDOT has committed to fully financing the SIIP.

Financial Resources Assigned

The Project is funded with a combination of revenues from federal and state sources. The fiscal year 2003 Six-Year Program includes current and projected allocations of \$676,257,000 for the Springfield Interchange Improvement Project. The following table illustrates that the total allocations equal the project estimate. However, due to updates of the project estimates since the development of the Six-Year Program last spring (2002), adjustments among the projects are needed. These budget adjustments will be addressed during the next update of the Six-Year Program in the spring of 2003. The updated Six-Year Program for fiscal year 2004 will be presented in tentative form to the CTB in May 2003.

A detailed chart of allocations to date and for each year through 2008 is presented in Exhibit IV. The following table provides a consolidated snapshot of the Project's estimates and allocations by each of the elements.

Springfield Interchange Improvement Project Project Allocations (amounts in 000's)					
Phase	Description of Activity	Project Estimate	Total Project Allocations	Allocation Surplus or (Deficit)	
Pre-Construction Activities					
PE	Design	\$ 48,000	\$ 44,991	\$ (3,009)	
RW	Acquisition of real estate	75,000	71,106	(3,894)	
Construction Activities					
Phase I	I-95 southbound 4th lane.	2,973	2,778	(195)	
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive.	2,040	2,040	-	
Phase I-B	Beltway ramps.	869	891	22	
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road.	131,500	133,000	1,500	
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound.	172,938	178,500	5,562	
Phase V	Part of eastbound Beltway; Ramp N-W.	83,143	95,500	12,357	
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S.	125,362	113,000	(12,362)	
Other Activities					
Congestion Mitigation	Minimize traffic impacts	28,000	28,000	-	
Information Center	Driver Information services	5,982	6,000	18	
Stream Compensation	Environmental Requirement	450	450	-	
Total Project		<u>\$ 676,257</u>	<u>\$ 676,257</u>	<u>\$ -</u>	

Actual cost compared to Project Cost Estimate

The following table depicts the estimated project cost compared to actual expenditures as of November 30, 2002. This chart demonstrates that the project is funded for cost incurred to date. To ensure future costs are reasonable and adequately funded, the Department will annually compare the actual cost incurred to the project cost estimate and adjust the allocations, if needed. Exhibit V provides a more detailed accounting of the Project's costs.

Project Cost Estimates Schedule
(as of November 30, 2002 and to complete)
(amounts in 000s)

			<u>Expenditures</u>	
<u>Phase</u>	<u>Description of Activity</u>	<u>Project Estimate</u>	<u>Through</u>	
			<u>11/30/2002</u>	<u>To Complete</u>
Pre-Construction Activities				
PE	Design	\$ 48,000	\$ 44,821	\$ 3,179
RW	Acquisition of real estate	75,000	68,612	6,388
Construction Activities				
Phase I	I-95 southbound 4th lane	2,973	2,973	Completed
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	2,040	2,040	Completed
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	869	869	Completed
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road	131,500	130,082	1,418
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	172,938	105,583	67,355
Phase V	Part of eastbound Beltway; Ramp N-W	83,143	39,006	44,137
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	125,362	-	125,362
Other Activities				
Congestion Management	Minimize traffic impacts	28,000	14,390	13,610
Information Center	Driver information service	5,982	1,610	4,372
Stream Compensation	Environmental Requirement	450	-	450
Total Project		<u><u>\$ 676,257</u></u>	<u><u>\$ 409,985</u></u>	<u><u>\$ 266,271</u></u>
* Represents set asides for quantities/closeout costs.				

Impact of other future cost changes

VDOT is responsible to deliver the SIIP on time and at a reasonable cost. There are many challenges that may be encountered in delivering such a large and complex project. Potential unforeseen events that occur throughout the life of a project of this magnitude may include:

- Changed environmental and subsurface conditions
- Variance between contract estimates and contract bid prices
- Other items related to design are not a significant issue in this late stage of the project

While every effort has been made to assess adequately the risks associated with the above potential events, there still remains some risk. In the case of changed environmental and subsurface conditions, it is economically and practically impossible to drill and/or use other investigative methods to provide a level of subsurface detail that would eliminate all environmental and subsurface unknowns. In the case of variance between engineering estimates and recent contract bids, the current economic markets are in such a state of flux that recent historical bids cannot be relied upon for accurate projections. Recent bids have been trending downward, yet bids for Phases VI and VII are not expected to be submitted until August/September of 2003, when market conditions may be substantially different. Therefore, the Department has relied on the average of bids to date for an estimate of contract cost, and will further refine the contract estimate just prior to bid opening for Phases VI and VII.

Section 5 – Project Cash Flow

Forecasted Project Cost Compared To Allocations By Fiscal Year

The SIIP is a high priority for the Department. This is evidenced by the project being fully funded. Through the annual Six-Year Program update, allocations will be adjusted as needed to attempt to match fiscal year expenditures with annual allocations. The chart presented in Exhibit VII demonstrates that the annual allocations closely match projected fiscal year expenditures. This assures that the resources and cash flow are available for the Project.

Approach

The Project's annual cash expenditure projections are based on the contractor's schedule submittals, identified remaining work, and the Project's staffing needs to provide oversight, and other related costs. Each of the defined elements of cost, for each respective phase, is tracked, monitored, and reported each month by comparing actual expenditures as posted in the Department's financial management system against planned costs. Periodically, each cost element's history is reviewed and the expenditure forecast plans are revised as necessary. If the review process surfaces cost changes or factors that would significantly change the total cost estimate of the Project, management is notified and the situation is investigated and measures initiated to mitigate the issue. After the expenditure forecast is finalized each month, the remaining expenditures for the current fiscal year (July to June) and to complete are computed and become the amounts included within the SIIP Financial Plan.

Section 6 – Other Factors

Cost or Schedule Factors

During the course of building a road project, many unexpected things can happen that could have an impact on the project both operationally and financially. The following identifies a couple items that have not been fully resolved and could impact the project.

Law enforcement review – Law enforcement authorities are reviewing allegations of improprieties on the Project. We are not privy to the details of this review and therefore cannot comment on the impact it may have on the Project's schedule or cost.

Phases VI and VII contract – The potential exists for the bid prices for Phases VI and VII to vary from current estimates.

Future Updates

Any required adjustments to the cost estimate will be computed in a manner consistent with the methodology established in this Initial Financial Plan. This Initial Financial Plan will be updated each year as of November 30. The updates will be submitted by following January 15. Therefore, the first annual update will be due on or before January 15, 2004.

Internally, the Department will continue to monitor the SIIP monthly to prevent or identify potential issues early. Formal updates to the Financial Plan will be done quarterly. The first update will be as of February 28, 2003 and completed by April 15, 2003.

Section 7 - Staff resources

Philip A. Shucet

Commissioner

(804) 786-2701

Frank C. Gee

Chief of Operations

(804) 786-2707

Malcolm T. Kerley

Chief Engineer for Program Development

(804) 786-4798

Barbara W. Reese

Chief Financial Officer

(804) 786-5128

Thomas F. Farley

District Administrator, Northern Virginia

(703) 383-2477

John D. DePasquale

Assistant District Engineer, Northern Virginia

(703) 383-2455

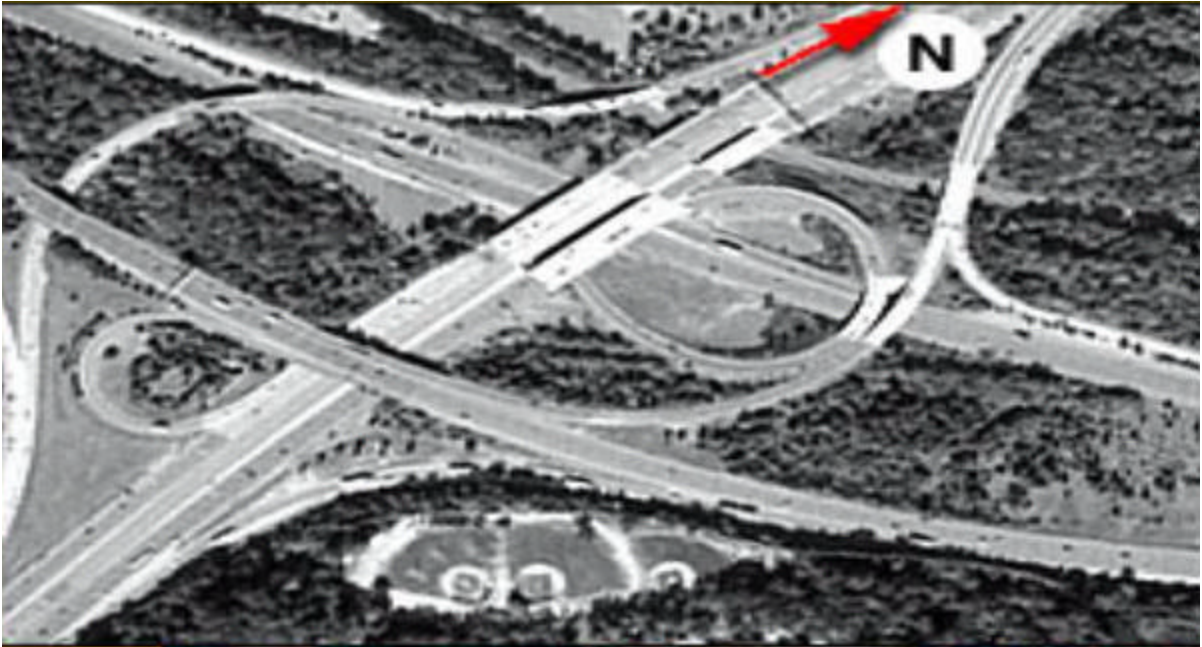
Larry O. Cloyed

SIIP Project Manager

(703) 313-6685

EXHIBITS

EXHIBIT I - I-95 / I-395 / I-495 Interchange
Before



After

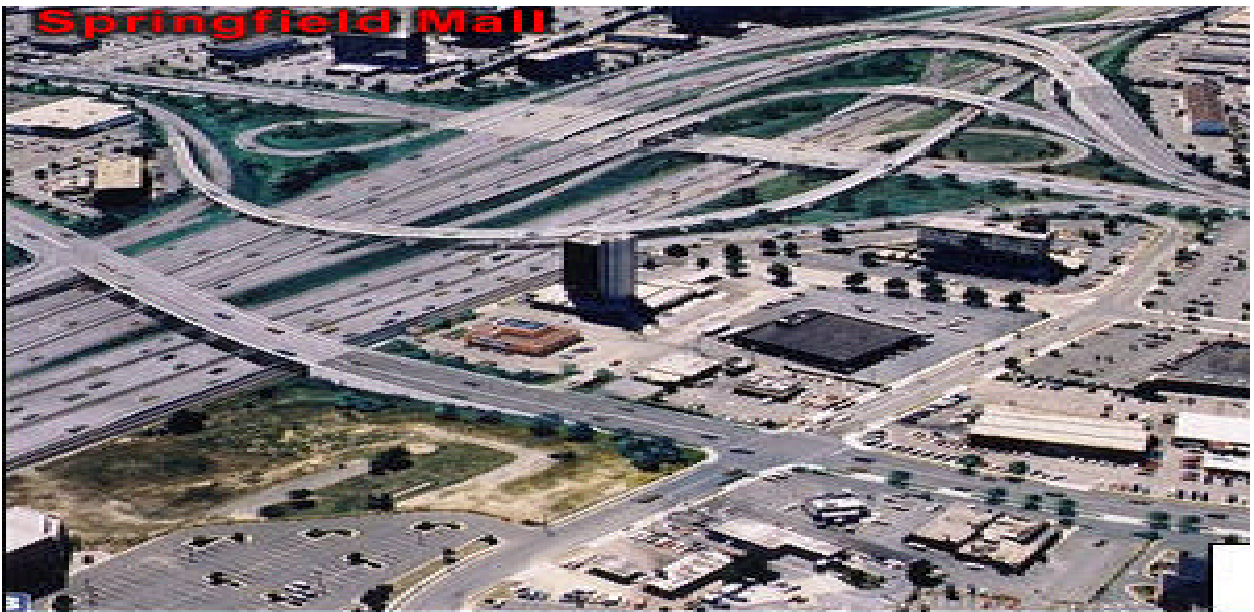


EXHIBIT II - Route 644 / I-95 Interchange

Before



After



Springfield Interchange looking southeast

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

EXHIBIT III – Federal Obligations Summary

Exhibit III - Springfield Interchange Improvement Project Federal Authorizations and Collections As of November 30, 2002							
	Federal Project		Funding	Federal	Planned Future	Total	
Phase	Number	Type Funds	Split %	Authorization Amount	Federal Authorization	Anticipated Federal	Collected from FHWA
Pre-Construction Activities							
PE	095-2(354)174	IM	90/10	\$ 37,737,850	\$ 2,754,950	\$ 40,492,800	\$ 37,737,850
RW	095-2(415)	IM	90/10	40,146,964		58,524,141	38,291,772
		NH	80/20	200,000			
	095-2(399)	IM	90/10	16,200,000			16,199,988
Additional RW		IM	90/10		1,977,177		
Construction Activities							
Phase I	095-2(369)	NH	90/10	2,634,252	(134,052)	2,500,200	2,634,252
Phase I-A	095-2(403)	IM	90/10	2,027,173	(191,173)	1,836,000	1,639,485
Phase I-B	095-2(417)	IM	90/10	788,533	13,367	801,900	751,984
Phases II & III	095-2(419)	IM	90/10	76,380,854	18,325,204	116,746,858	98,421,654
		DEMO	80/20	22,040,800			
Phase IV	095-2(445)	IM	100	139,270,014	39,229,978	178,499,992	98,932,932
Phase V	095-2(462)	IM	100	65,607,311	29,892,676	95,499,987	32,304,033
Phases VI & VII		IM	90/10		101,700,000	101,700,000	-
Other Activities							
Congestion Mitigation	095-2(409)	NH	80/20	2,303,185	4,091,032	25,184,489	665,775
	095-2(410)	NH	80/20	3,782,400	4,353,000		3,185,590
	095-2(411)	NH	80/20	400,000	(180,000)		200,872
	095-2(412)	NH	80/20	4,597,901	1,520,624		3,629,269
	095-2(426)	NH	100	320,000			320,000
	095-2(427)	NH	100	1,693,000			988,000
	095-2(428)	NH	100	150,000			55,523
	095-2(429)	NH	100	650,000			600,989
	095-2(433)	NH	100	520,000			292,476
	095-2(441)	NH	100	25,280			-
	095-2(444)	NH	100	191,678			184,762
	095-2(450)	NH	100	186,200			126,335
	095-2(453)	NH	100	323,300			-
	095-2(454)	NH	100	40,000			-
	095-2(461)	NH	100	629,003			629,003
Closing Adjustment					(412,114)		
Information Center	095-2(437)	NH	100	1,600,000	4,400,000	6,000,000	1,587,614
Wetland Mitigation		NH	80/20		360,000	360,000	
Total Program				\$ 420,445,698	\$ 207,700,669	\$ 628,146,367	\$ 339,380,158

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

EXHIBIT IV – Project Allocations

Exhibit IV - Springfield Interchange Improvement Project										
Project Allocations (amounts in 000's)										
Phase	Description of Activity	Project Estimate	Fiscal Year		Future Allocations					
			Previous Allocations	2002-03 Allocation	Fiscal Year 2003-04	Fiscal Year 2004-05	Fiscal Year 2005-06	Fiscal Year 2006-07	Fiscal Year 2007-08	
Pre-Construction Activities										
PE	Design	\$ 48,000	\$ 44,992	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RW	Acquisition of real estate	75,000	21,049	23,049	23,340	3,668	-	-	-	-
Construction Activities										
Phase I	I-95 southbound 4th lane.	2,973	2,778	-	-	-	-	-	-	-
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive.	2,040	2,040	-	-	-	-	-	-	-
Phase I-B	Beltway ramps.	869	891	-	-	-	-	-	-	-
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road.	131,500	117,774	6,197	9,029	-	-	-	-	-
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound.	172,938	80,676	40,000	34,000	18,819	5,005	-	-	-
Phase V	Part of eastbound Beltway; Ramp N-W.	83,143	36,369	30,000	29,131	-	-	-	-	-
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S.	125,362	10,000	8,066	10,500	10,880	22,280	36,944	14,330	
Other Activities										
Congestion Mitigation	Minimize traffic impacts	28,000	18,046	3,109	3,167	2,359	1,319	-	-	-
Information Center	Driver Information services	5,982	3,170	700	700	700	730	-	-	-
Wetland Mitigation		450	-	450	-	-	-	-	-	-
Total Project		\$ 676,257	\$ 337,785	\$ 111,571	\$ 109,867	\$ 36,426	\$ 29,334	\$ 36,944	\$ 14,330	

EXHIBIT V– Detailed Expenditure Report

Exhibit V - Springfield Interchange Improvement Project
Program Financial Status Report
(amounts in 000's)
As of November 30, 2002

			Program Status	
Phase	Description of Activity	Project Estimate	Expenditures	Expenditures
			Through 11/30/2002	To Complete
Pre-Construction Activities				
PE	Design	\$ 48,000	\$ 44,822	\$ 3,179
RW	Acquisition of real estate	75,000	68,612	6,388
Construction Activities				
Phase I	I-95 southbound 4th lane	2,973	2,973	-
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	2,040	2,040	-
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	869	869	-
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road	131,500	130,082	1,418
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	172,938	105,583	67,355
Phase V	Part of eastbound Beltway; Ramp N-W	83,143	39,006	44,137
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	125,362	-	125,362
Other Activities				
Congestion Management	Minimize traffic impacts	28,000	14,390	13,610
Information Center	Driver information service	5,982	1,610	4,372
Stream Compensation	Environmental Requirement	450	-	450
Total Project		\$ 676,257	\$ 409,986	\$ 266,271

Exhibit V - Springfield Interchange Improvement Project
Program Financial Status Report
(amounts in 000's)
As of November 30, 2002

Phase	Description of Activity	Project Estimate	Non-Construction Activities PE, RW, etc.			Construction Activities		
						Construction		
			Expenditures Through 11/30/2002	Expenditures To Complete	Total Expenditures	Expenditures Through 11/30/2002	Expenditures To Complete	Total Expenditures
Pre-Construction Activities								
PE	Design	\$ 48,000	\$ 44,822	\$ 3,179	\$ 48,000	\$ -	\$ -	\$ -
RW	Acquisition of real estate	75,000	68,612	6,388	75,000			
Construction Activities								
Phase I	I-95 southbound 4th lane	2,973				2,796	-	2,796
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	2,040				1,526	-	1,526
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	869				664	-	664
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southboundroads; Franconia/Old Keene Mill Road	131,500				89,837	511	90,348
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	172,938				89,526	27,872	117,398
Phase V	Part of eastbound Beltway; Ramp N-W	83,143				32,883	19,807	52,690
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	125,362				-	92,309	92,309
Other Activities								
Congestion Management	Minimize traffic impacts	28,000	14,390	13,610	28,000			
Information Center	Driver information service	5,982	1,610	4,372	5,982			
Stream Compensation	Environmental Requirement	450	-	450	450			
Total Project		\$ 676,257	\$ 129,433	\$ 27,999	\$ 157,432	\$ 217,232	\$ 140,499	\$ 357,731

Exhibit V - Springfield Interchange Improvement Project
Program Financial Status Report
(amounts in 000's)
As of November 30, 2002

Phase	Description of Activity	Project Estimate	Construction Activities					
			Construction Engineering					
			Expenditures Through 11/30/2002	Percent of Construction	Expenditures To Complete	Percent of Construction to Complete	Total Expenditures	Percent of Construction
Pre-Construction Activities								
PE	Design	\$ 48,000	\$ -		\$ -		\$ -	
RW	Acquisition of real estate	75,000						
Construction Activities								
Phase I	I-95 southbound 4th lane	2,973	177	6%	-	0%	177	6%
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	2,040	514	34%	-	0%	514	34%
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	869	205	31%	-	0%	205	31%
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road	131,500	15,023	17%	9	2%	15,032	17%
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	172,938	8,353	9%	12,502	45%	20,855	18%
Phase V	Part of eastbound Beltway; Ramp N-W	83,143	3,501	11%	6,940	35%	10,441	20%
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	125,362	-	0%	19,794	21%	19,794	21%
Other Activities								
Congestion Management	Minimize traffic impacts	28,000						
Information Center	Driver information service	5,982						
Stream Compensation	Environmental Requirement	450						
Total Project		\$ 676,257	\$ 27,773	13%	\$ 39,245	28%	\$ 67,018	19%

Exhibit V - Springfield Interchange Improvement Project
Program Financial Status Report
(amounts in 000's)
As of November 30, 2002

Phase	Description of Activity	Project Estimate	Construction Activities								
			Contingency				Early Completion Incentive				
			Expenditures				Expenditures				
			Through 11/30/2002	Expenditures To Complete	Total Expenditures	Percent of Construction	Through 11/30/2002	Expenditures To Complete	Total Expenditures		
Pre-Construction Activities											
PE	Design	\$ 48,000	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -		
RW	Acquisition of real estate	75,000									
Construction Activities											
Phase I	I-95 southbound 4th lane	2,973									
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive	2,040									
Phase I-B	Second lane to the existing ramp from I-95 northbound to I-495 westbound	869									
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southboundroads; Franconia/Old Keene Mill Road	131,500	15,222	898	16,120	18%	10,000	-	10,000		
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound	172,938	7,704	20,067	27,771	24%	-	6,914	6,914		
Phase V	Part of eastbound Beltway; Ramp N-W	83,143	2,622	10,910	13,532	26%	-	6,480	6,480		
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S	125,362	-	12,759	12,759	14%	-	500	500		
Other Activities											
Congestion Management	Minimize traffic impacts	28,000									
Information Center	Driver information service	5,982									
Stream Compensation	Environmental Requirement	450									
Total Project		\$ 676,257	\$ 25,548	\$ 44,634	\$ 70,182	20%	\$ 10,000	\$ 13,894	\$ 23,894		

EXHIBIT VI- Summary of Key Project Assumptions, Risks and Mitigation

Phase	Assumptions & Justifications	Discussion/Potential Risks	Risk Mitigation
Preliminary Engineering	Approximately 98% complete excluding Design Liaison support to Construction	<p>Overrun in man hour estimates for Consultant services for design</p> <p>Owner changes</p> <p>Plan reductions/savings Railroad Final Plan set reviews</p> <p>Extended liaison support costs</p> <p>Design errors/omissions</p>	<p>Analyze, track, and control man hour expenditures</p> <p>Minimize changes – control scope creep</p> <p>Close coordination with railroad to mitigate/minimize changes/delays</p> <p>Reduce liaison support costs by constraining unneeded use, and by Renegotiation of costs</p> <p>Concentrate on error free contract spec deliverable. Track performance accordingly</p> <p>Current budget has been established to cover known and anticipated exposure to the above noted risks</p>
Right-of-Way/Utilities	<p>Purchased 100% of R/W</p> <p>Costs currently @ 92% Complete.</p> <p>Utility relocations (out of plan) 100 % complete. Some settlements/condemnations remaining.</p>	<p>New purchase requirements due to railroad bridge revisions</p> <p>New utility relocations due to railroad bridge revisions</p> <p>Final settlement costs exceeding Set asides for remaining Condemnations</p>	<p>Consultant review of bridge TS & LS indicate no new purchase requirements. An independent verification is pending.</p> <p>Cursory review by consultant indicates no major relocations required. An independent verification is pending.</p> <p>All remaining condemnations and set asides/expenses analyzed. Will be re-analyzed, tracked and forecast monthly.</p> <p>Current budget has been established to cover known and anticipated exposure to the above noted risks.</p>
Stream Compensation	Currently Under Design	<p>Design incomplete/Man hour design estimate over runs</p> <p>Construction estimates not fully validated at completion</p> <p>Quality Assurance reviews not Complete.</p>	<p>Track/fix/control design man hours</p> <p>Run final Transport estimate, CEI estimate and Contingency set-asides</p> <p>Re-check all plans, specs, provisions, price sheets, boiler plates, to deliver a reasonably error free contract.</p>

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

Phase	Assumptions & Justifications	Discussion/Potential Risks	Risk Mitigation
Congestion Management Program	Currently Underway Approved CMP Plan	Not establishing an adequate contingency fund to cover committee approved projects/ overruns. Growth/Creep based on unknown resources/assumptions. Failure to routinely re-assess strategies/expenditures as SIIP nears completion.	Established contingency funding and targets by continual reassessment of all program costs. Scale back of expenses of future projects to cover forecasted contingencies. Establish continual tracking and reporting. Accurately forecast creep to eliminate cost creep. Establish routine review of strategies/expenditures, in close coordination with project completion milestones Current budget has been established to cover known and anticipated exposure to the above noted risks
Information Center	Currently underway Information in place and In operation	Failure to reassess strategies/ expenditures as SIIP construction nears completion. Not establishing adequate contingency funds to cover expenses. Failure to control growth/creep based on unknown reserves/ assumptions.	Established routine review of strategies/expenditures, in close coordination with project milestones Establish continual tracking and reporting. Eliminate creep, accurately forecast project expenditures. Current budget has been set aside to cover known and anticipated exposure to the above noted risks
II/III (Rte 644 Interchange)	Completed	Semi-final and final payment could be more than projected	Current budget has been established to cover remaining expected expenses

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

Phase	Assumptions & Justifications	Discussion/Potential Risks	Risk Mitigation
IV (East to Van Dorn St)	<p>Ongoing</p> <p>Budget covers all known costs</p> <p>Estimate based on experience of Phases II and III.</p> <p>All major work activities are under contract and cost fairly predictable.</p>	<p>CSX/WMATA Delay Claim</p> <p>Sanitary Sewer (Cabin John)</p> <p>Miscellaneous letters of intent</p> <p>Potential Change Orders (PCO)</p> <p>Cost Overruns</p> <p>Prorate Costs (overheads)</p> <p>Fuel and Price adjustments</p> <p>Time Extension Impacts</p> <p>Resistance to unilateral directive to maintain schedule</p>	<p>Analysis of CSX/WMATA delays and unilateral settlement. Cursory review of other known claims</p> <p>Analysis of PCO submittals</p> <p>Field analysis of potential quantity under/overruns</p> <p>Continuously monitor/analysis of prorate costs</p> <p>None</p> <p>Current budget has been established to cover known and anticipated expense risks</p> <p>Time extensions analyzed for impact against 2007 completion plan</p> <p>Pursue completion of construction as directed. Document contractors resistance</p>

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

Phase	Assumptions & Justifications	Discussion/Potential Risks	Risk Mitigation
V (West to Heming Ave)	<p>Ongoing</p> <p>Budget covers all known costs</p> <p>Estimate based on experience of Phases II and III.</p> <p>All major work activities are under contract and cost fairly predictable.</p>	<p>Sanitary Sewer conflict between Phase IV/V (Stg 1 Early)</p> <p>Sanitary Sewer conflict Imposed by Phase IV (Cabin John)</p> <p>Potential Change Orders (PCO) Cost Overruns</p> <p>Prorate Costs (overheads)</p> <p>Fuel and Price Adjustments</p> <p>Time Extension Impacts</p>	<p>Analysis and mutual settlement of SS conflict Stage 1 Early</p> <p>Recovery schedule developed to minimize impact</p> <p>Analysis of PCO submittals Field analysis of potential quantity under/overruns</p> <p>Continuously monitor/analysis of prorate costs</p> <p>None</p> <p>Time extensions analyzed for impact against 2007 completion plan</p> <p>Current budget has been established to cover known and anticipated expense to these risks</p>

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

Phase	Assumptions & Justifications	Discussion/Potential Risks	Risk Mitigation
VI/VII Interchange Connections	<p>Under final design. – 96% complete</p> <p>Assume all changes finalized</p> <p>Ad date June 2003</p>	<p>Differing site conditions</p> <p>Potential claims/disputes/litigations/changes/added work due to plan deficiencies</p> <p>Variance between contract bids and Engineers Estimate</p> <p>Cost overruns due to price sheet errors/plan errors/ inadequate design quantities</p> <p>Changes in Prorate (overheads)</p> <p>Potential time extensions</p> <p>Railroad delays/demands</p>	<p>Back check of all known site conditions</p> <p>Concentration on Plans/Specs via back checks to assure error free delivery</p> <p>Analysis of potential claims based upon known conditions and a reasonably error free contract</p> <p>Thorough review of Transport estimates @ 99% design completion</p> <p>Thorough back checks of cost against units/plan summaries/ special provision/final price sheets and estimated quantity assumptions</p> <p>Forecasting average prorates (overheads) as currently known</p> <p>Project pre -CPM run and sufficient time exists for completion, with minor allowances for recovery</p> <p>Thorough analysis of potential railroad risks known and anticipated. Work closely with railroad officials to mitigate known and anticipated delays/impact.</p> <p>Sufficient funding (based upon a reasonably error free contract and re-check site/utility conditions), and including the above noted credit for real estate to handle bid variances, has been set aside to cover the above known and current anticipated bids.</p> <p>Current funding is established to cover 10% beyond variance and reasonable cost/schedule changes during construction.</p>

SPRINGFIELD INTERCHANGE IMPROVEMENT PROJECT
INITIAL FINANCIAL PLAN

EXHIBIT VII – Expenditures to Allocations Comparison

Expenditures to Allocations Comparison (amounts in '000's)									
Phase	Description of Activity	Expenditures through 11/30/02	Projected Expenditures						Total Projected Expenditures
			Fiscal Year 2002-03	Fiscal Year 2003-04	Fiscal Year 2004-05	Fiscal Year 2005-06	Fiscal Year 2006-07	Fiscal Year 2007-08	
Pre-Construction Activities									
PE	Design	\$ 44,822	\$ 1,877	\$ 257	\$ 257	\$ 257	\$ 257	\$ 273	\$ 48,000
RW	Acquisition of real estate	68,612	2,080	1,875	2,433	-	-	-	75,000
Construction Activities									
Phase I	I-95 southbound 4th lane.	2,973	-	-	-	-	-	-	2,973
Phase I-A	Ramp connecting I-95 northbound to Spring Mall Drive.	2,040	-	-	-	-	-	-	2,040
Phase I-B	Beltway ramps.	869	-	-	-	-	-	-	869
Phases II & III	Route 644 interchange; Commerce Street; Parts of local northbound and southbound roads; Franconia/Old Keene Mill Road.	130,082	1,418	-	-	-	-	-	131,500
Phase IV	I-95 southbound; Part of Beltway at railroad, part of HOV roadway, and ramp from I-495 to I-95 southbound.	105,583	42,634	24,721	-	-	-	-	172,938
Phase V	Part of eastbound Beltway; Ramp N-W.	39,006	26,273	17,864	-	-	-	-	83,143
Phases VI & VII	I-95 northbound, Ramp N-E, S-W, W-N and local ramps; I-395 southbound and HOV roadway, Ramp W-S.	-	300	23,700	39,200	36,500	25,662	-	125,362
Other Activities									
Congestion Mitigation	Minimize traffic impacts	14,390	1,590	2,404	2,404	2,404	2,404	2,404	28,000
Information Center	Driver information service	1,610	550	768	768	768	768	750	5,982
Wetland Mitigation		-	450	-	-	-	-	-	450
Total Project		\$ 409,987	\$ 77,172	\$ 71,589	\$ 45,062	\$ 39,929	\$ 29,091	\$ 3,427	\$ 676,257
Cumulative Expenditures		\$ -	\$ 487,159	\$ 558,748	\$ 603,810	\$ 643,739	\$ 672,830	\$ 676,257	\$ -
Annual Allocations (Expenditure to date column reflects allocations through FY 2002)		337,785	111,571	109,867	36,426	29,334	36,944	14,330	676,257
Cumulative Allocations			449,356	559,223	595,649	624,983	661,927	676,257	
Allocation Surplus or (Deficit)			\$ 37,803	\$ (475)	\$ 8,161	\$ 18,756	\$ 10,903	\$ -	\$ -